

WHAT IS CLAIMED IS:

1. A signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein  $Tf_{\max}$  denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

$Tf_{\min}$  denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and T satisfy the following formula (1):

Formula (1):  $Tf_{\max} - Tf_{\min} \geq 0.01T$ .

2. A signal output method according to claim 1, wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and  $T$  satisfy the following formula:

$$0.4T \geq Tf_{\max} - Tf_{\min} \geq 0.06T.$$

3. A signal output method according to claim 1, wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and  $T$  satisfy the following formula:

$$Tf_{\max} - Tf_{\min} = 0.25T.$$

4. A signal output method according to claim 1, wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and  $T$  satisfy the following formula:

$$Tf_{\max} - Tf_{\min} = 0.15T.$$

5. A signal output method according to claim 1, wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and  $T$  satisfy the following formulae:

$$1.8T \geq Tf_{\max} \geq 0.5T$$

$$1.8T \geq Tf_{\min} \geq 0.5T.$$

6. A signal output method according to claim 1, wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and  $T$  satisfy the following formulae:

$$1.5T \geq Tf_{\max} \geq 0.7T$$

$$1.5T \geq Tf_{\min} \geq 0.7T.$$

7. A signal output method according to claim 1, wherein when  $T_{mp}$  denotes an output interval of each write data signal except the first and the last write data signals among the write

data signals, the write signal is outputted so that  $T_{mp}$  and  $T$  satisfy the following formula:

$$0.84T \geq T_{mp} \geq 0.4T.$$

8. A signal output method according to claim 1, wherein when  $T_{mp}$  denotes an output interval of each write data signal except the first and the last write data signals among the write data signals, the write signal is outputted so that  $T_{mp}$  and  $T$  satisfy the following formula:

$$0.78T \geq T_{mp} \geq 0.6T.$$

9. A signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein  $T_{l_{max}}$  denotes an output interval of a last write data signal among write data signals corresponding to a write permission signal immediately preceding a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

$T_{l_{min}}$  denotes an output interval of the last write data signal among the write data signals corresponding to a write

permission signal immediately preceding the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

$T$  denotes a reference period, and

wherein the write signal is outputted so that  $Tl_{\max}$ ,  $Tl_{\min}$  and  $T$  satisfy the following formula (2):

$$\text{Formula (2): } Tl_{\min} - Tl_{\max} \geq 0.01T.$$

10. A signal output method according to claim 9, wherein the write signal is outputted so that  $Tl_{\max}$ ,  $Tl_{\min}$  and  $T$  satisfy the following formula:

$$0.4T \geq Tl_{\min} - Tl_{\max} \geq 0.06T.$$

11. A signal output method according to claim 9, wherein the write signal is outputted so that  $Tl_{\max}$ ,  $Tl_{\min}$  and  $T$  satisfy the following formula:

$$Tl_{\min} - Tl_{\max} = 0.25T.$$

12. A signal output method according to claim 9, wherein the write signal is outputted so that  $Tl_{\max}$ ,  $Tl_{\min}$  and  $T$  satisfy the following formula:

$$Tl_{\min} - Tl_{\max} = 0.15T.$$

13. A signal output method according to claim 9, wherein the write signal is outputted so that  $Tl_{\max}$ ,  $Tl_{\min}$  and  $T$  satisfy the following formulae:

$$0.9T \geq Tl_{\max} \geq 0.2T$$

$$0.9T \geq Tl_{\min} \geq 0.2T.$$

14. A signal output method according to claim 9, wherein

the write signal is outputted so that  $Tl_{\max}$ ,  $Tl_{\min}$  and  $T$  satisfy the following formulae:

$$0.7T \geq Tl_{\max} \geq 0.3T$$

$$0.7T \geq Tl_{\min} \geq 0.3T.$$

15. A signal output method according to claim 9, wherein when  $T_{mp}$  denotes an output interval of each write data signal except first and last write data signals among write data signals, the write signal is outputted so that  $T_{mp}$  and  $T$  satisfy the following formula:

$$0.84T \geq T_{mp} \geq 0.4T.$$

16. A signal output method according to claim 9, wherein when  $T_{mp}$  denotes an output interval of each write data signal except first and last write data signals among write data signals, the write signal is outputted so that  $T_{mp}$  and  $T$  satisfy the following formula:

$$0.78T \geq T_{mp} \geq 0.6T.$$

17. A signal output method according to claim 9, wherein

$Tf_{\max}$  denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in the case in which the pause interval of the write signal is the maximum,

$Tf_{\min}$  denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to a pause interval

of the write signal in the case in which the pause interval of the write signal is the minimum, and

wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and  $T$  satisfy the following formula (1):

$$\text{Formula (1): } Tf_{\max} - Tf_{\min} \geq 0.01T.$$

18. An optical information recording medium having information recorded thereon by using a signal output method, the signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein  $Tf_{\max}$  denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

$Tf_{\min}$  denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to the pause interval of the write signal in a case in which the pause interval of

the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that  $Tf_{\max}$ ,  $Tf_{\min}$  and T satisfy the following formula (1):

Formula (1):  $Tf_{\max} - Tf_{\min} \geq 0.01T$ .

19. An optical information recording medium according to claim 18, wherein information can be recorded thereon by using a laser beam having a wavelength in the range of 350 nm to 500 nm.

20. An optical information recording medium according to claim 18, wherein the optical information recording medium is a write once type and a dye type.

21. An optical information recording medium having information recorded thereon by using a signal output method, the signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein  $Tl_{\max}$  denotes an output interval of a last write data signal among write data signals corresponding to a write

permission signal immediately preceding a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

$T_{l_{min}}$  denotes an output interval of the last write data signal among the write data signals corresponding to a write permission signal immediately preceding the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

$T$  denotes a reference period, and

wherein the write signal is outputted so that  $T_{l_{max}}$ ,  $T_{l_{min}}$  and  $T$  satisfy the following formula (2):

Formula (2):  $T_{l_{min}} - T_{l_{max}} \geq 0.01T$ .

22. An optical information recording medium according to claim 21, wherein information can be recorded thereon by using a laser beam having a wavelength in the range of 350 nm to 500 nm.

23. An optical information recording medium according to claim 21, wherein the optical information recording medium is a write once type and a dye type.